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«Jamendo: The Heartbeat of Free Music!» Musicians and the Creative Commons

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“Jamendo: The Heartbeat of Free Music!”

Musicians and the Creative Commons

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Abstract:

Jamendo is a website for the legal, free downloading of music. This platform of “free” online music, the biggest in the world, operates on the basis of Creative Commons licences. The survey presented here was carried out on a sample of 767 artists (solo musicians or groups) who are members of Jamendo. Our purpose in carrying out this survey was to identify as precisely as possible the characteristics of the artists present on Jamendo and the type of CC licence they choose in order to better understand the motives for their choices. To go further, the question is that of the Jamendo business model from the artists’ point of view. Does Jamendo simply represent a great opportunity for amateurs to showcase their music and win an audience? Or is Jamendo also capable of attracting professional artists, for whom earning an income from their music is essential? To put it another way, the underlying question is whether platforms like Jamendo constitute a possible alternative model for the music industry of tomorrow.

Keywords: *Music, Intellectual Property, Creative Commons, Business Model*

1 Introduction

With the spread of digital technologies and the development of a new-generation Internet that gives users a leading position as producers of content, the music industry has undergone a radical transformation. The aspect of these changes that has received the most media coverage is illegal downloading, blamed for the fall in CD sales and targeted by both technical (DRM) and legislative measures. However, although this phenomenon is real and its actual impact is difficult to evaluate, the transformation has a much broader effect on every level of the music industry, from the creation and production of works to their distribution and their consumption by consumers who are increasingly well-informed and independent.

These changes, and especially the ease with which works can be reproduced and distributed over distance, without any loss of quality, present a real challenge to the traditional frameworks of copyright and intellectual property protection, not only in the domain of music but in a wide range of creative activities. A group of jurists, initially American but quickly becoming international, reacted to this new context by conceiving a new form of copyright management, allowing creators to define, in a more refined way than the simple alternative between copyright and public domain, the manner in which their works can be circulated, copied or used. This is the purpose of the “Creative Commons”. Partly inspired by the experience of “open-source” software, this

licensing system has gradually been adapted to the specificities of national legal systems, while still retaining its unity.

A number of platforms on the Internet offer artists a choice between the traditional framework of copyright and the Creative Commons (CC). Jamendo (<http://www.jamendo.com/>), on the other hand, which is the world's first and biggest platform of "free" online music (i.e., free and legal downloading), has chosen to operate exclusively on the basis of CC licences. Under this condition, the artists hosted on the site can choose the level of protection that suits them best, particularly in terms of commercial exploitation and modification of the work. Founded in 2005, Jamendo now has more than 40,000 artists, 416,000 songs, 2 billion listens, and 154.8 million downloads.

This article is based on a survey of a sample of 780 artists (solo artists or groups) who are members of Jamendo. Our purpose in carrying out this survey was to identify as precisely as possible the characteristics of the artists present on Jamendo and the type of CC licence they choose in order to better understand the motives for their choices. To go further, the question is that of the Jamendo business model from the artists' point of view. Does Jamendo simply represent a great opportunity for amateurs to showcase their music and win an audience? Or is Jamendo also capable of attracting professional artists, for whom earning an income from their music is essential? To put it another way, the underlying question is whether platforms like Jamendo constitute a possible alternative model for the music industry of tomorrow.

The article is organised as follows. Section 2 gives an overview of the profound changes in the music industry since the beginning of the 21st century and examines how they have challenged both the business model and the questions of intellectual property and copyright. Section 3 then introduces the main principles underpinning Creative Commons licences and the reasons why Jamendo chose this mode of functioning from the outset. Section 4 presents the results of our survey of artists hosted on Jamendo and describes the main characteristics of the sample, analysing artists' attitudes towards the choice of CC licences, in particular depending on whether they practice their creative activity more on an amateur or a professional basis. Section 5 takes the analysis further by applying econometric tools to the survey results. It starts with a logit analysis on the choice of basic stipulations, followed by a multinomial analysis on the choice of licences, which are combinations of these basic stipulations. Finally, section 6 summarises the main conclusions of the analysis and briefly outlines the way that the forms of distribution proposed by Jamendo are likely to affect the direction of future developments in the world of musical creation.

2 *The music industry: a changing world*

With the spread of information and communication technologies in most areas of economic and social activity, there has been an accelerated digitization not only of tools but also of content, profoundly affecting the modes of both production and consumption in our society. This evolution has accompanied and supported the emergence of what has been called the knowledge economy or society (Machlup, 1962; Cowan, David and Foray, 2000), or cognitive capitalism (Moulier Boutang, 2007). It is characterized by the intensified codification and diffusion of knowledge and an ever-increasing accumulation of information and works whose reproduction and transfer over distance is becoming ever more efficient and cheap.

For the first time, one is perhaps justified in speaking of an "information revolution", such is the profound effect that the vast increase in knowledge and resulting unrestrained consumption are having on the social and economic functioning of our society. These changes are of course accompanied by evolutions in the organisation and management of firms and administrations. They shift the sites of the creation of value-added by transforming value chains (Richardson, 2008) and

by enabling a ceaseless extension of the sources of knowledge on which human activity is based, in fields as diverse as production, health, security, education, culture or leisure. They overturn the foundations of social cohesion, the functioning of social groups and inter-individual relations (Castells, 2012). They call into question the tools of economic and social regulation and therefore the responsibility of government and the foundations of law.

One of the major consequences of this evolution (or revolution) relates to intellectual property, the justification and protection of which are based on increasingly outdated conceptions of innovation, invention and inventors, and the principle that the incentive to innovate resides in the prospect of a temporary monopoly over the commercial exploitation of the fruits of the invention (Arrow, 1962). The current resurgence of a collective dimension to invention and innovation, as evidenced by movements like Open Source, Creative Commons or Wikis, cannot really operate within the traditional framework of intellectual property protection.

From another angle, the boom in the downloading of documents, music and films (through peer-to-peer technologies) and its consequences for the publishing and audiovisual industries show the extent to which the hitherto dominant conception of the cultural industries has been challenged. The reaction was rapid: at the economic level with the campaign for the patentability of living matter and patents on software, at the technical level with digital rights management (DRM), and at the legal level with the Digital Millennium Act in the United States and the European Directive of 2001, then in France the ill-fated “DADVSI” law (law on authors' rights and related rights in the information society) (Lucien, 2009) and the creation of the HADOPI (high authority for the distribution and protection of creative works on the internet), based, as in the United Kingdom, on the principle of “graduated response” (Rayna and Barbier, 2010).

Does this mean that the very principle of copyright is threatened by the spread of digital technologies? Looking at this question solely in terms of the figures on illegal downloading, one would be tempted to think so, although it is the reproduction of works that is in question, rather than the denial of their authorship. For this reason, the issue relates more to the commercial exploitation of the work than to its appropriation and modification or to the effacement of its origin, although such phenomena, until now marginal and usually limited to private and individual spheres, can also be mentioned.

The fact is that these movements in support of a more open approach to intellectual property, through free software licences or Creative Commons, for example, do not reject the idea of copyright: on the contrary, they seek to provide a suitable legal framework for copyright. It is up to the author alone to decide on the rights and obligations of those who use his work, either for consumption or for incorporation into their own activities, whether or not these latter are commercial. The aim of these new and innovative legal tools is to define these rights and obligations by choosing the terms of the contract, by selecting from a spectrum of options ranging from the closure of classic copyright at one extreme to the abandonment of rights to the public domain at the other (Elkin-Koren, 2005).

From this innovative perspective, the only real question is that of the status of intellectual property and the exercise of property rights by the authors, within a social and technological context that underscores the limits and obsolescence of the prevailing conceptions of property rights protection. The current transformation is undermining the legal, social and economic models of modern society, and the relentless efforts of the lawmakers to shore up these outdated conceptions is probably not the best way to move forward.

So the information society, which has been a recurrent theme for many years and which we are only now really beginning to enter, is showing up the limits of existing institutional references and obliging us to consider new economic models, new legal frameworks, new institutions and new statuses (Castells, 2000).

As far as the world of musical creation is concerned, profound changes have been generated by digital technologies, affecting the conditions of both the production and the distribution of musical works. Firstly, almost all musicians, whether solo artists or groups, can now acquire, at little cost, the equipment needed to record and mix songs and produce albums. Self-production is now accessible to everyone. Secondly, as regards the distribution of songs, the vast potential of the Internet to provide artists with access to a large audience, provided they can create a “buzz”, the mechanisms of which are only partly understood and mastered (Larceneux, 2007). The age of pioneers like MySpace has given way to peer-to-peer (P2P) technologies, streaming sites, social networks and platforms of legal downloading, either for a charge or free like Jamendo. We have moved away from a star-system model, set up by the major record labels and consisting in getting most of their income from a small number of artists (Adler, 2006), towards a model of overabundant supply, which raises a problem involving the economics of attention, on both the supply side and the demand side (Lanham, 2006).

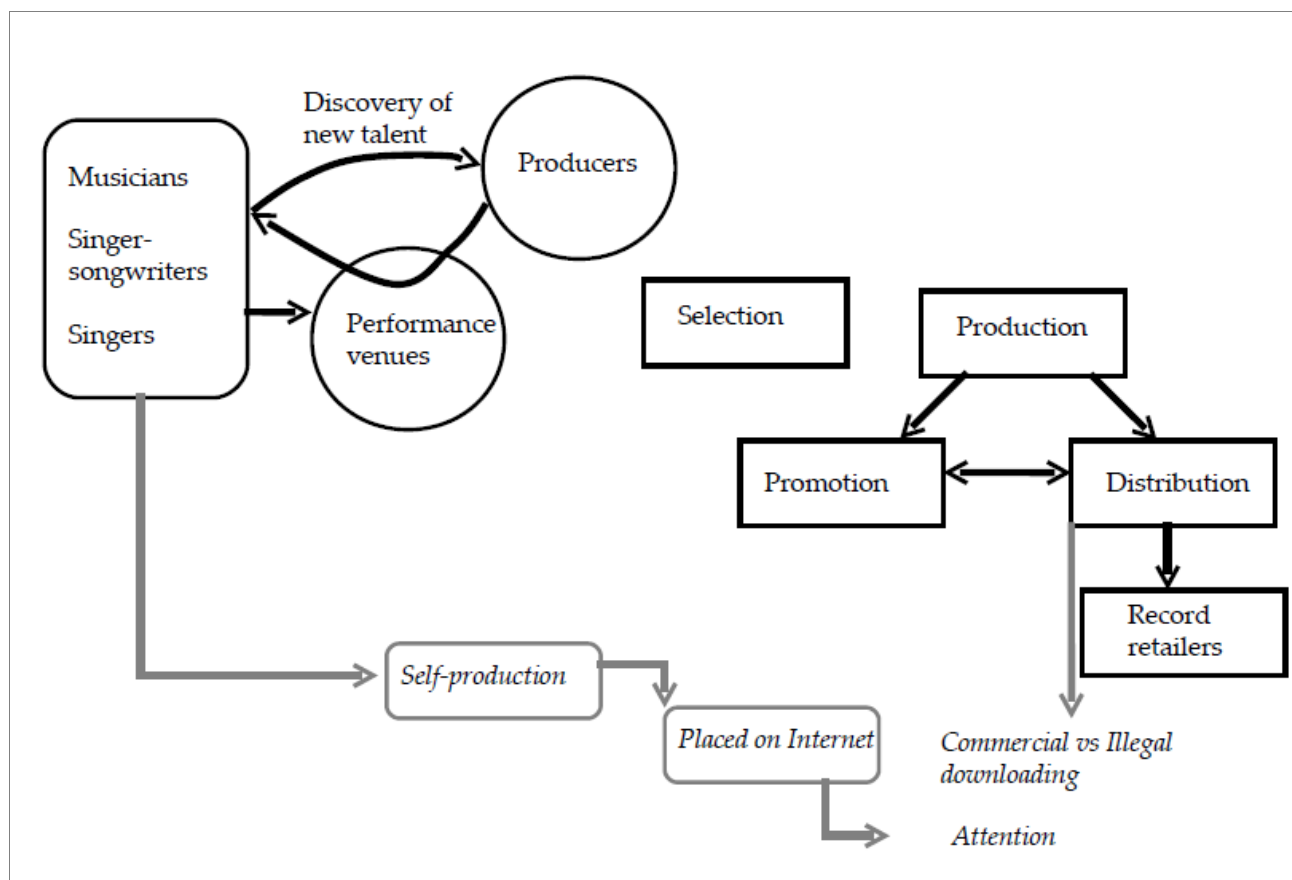


Figure 1: a radical challenge to the music industry business model

This calls into question the whole model of musical creation and the music industry, at every level (Figure 1). One immediate and objective consequence of this revolution has been a decline in the volume of CDs that record labels have been able to sell since the beginning of the 2000s. Taking one of the “majors” – Universal – as an example, this fall in sales had a direct effect on their turnover (Figure 2). However, if we consider profits instead of turnover (Figure 3), we can see that after a sharp fall at the beginning of this period, Universal’s profits rose equally fast from 2005, to reach a level equivalent to the pre-crisis period, in absolute terms, or even higher (by 10 to 15%) in

relative terms.

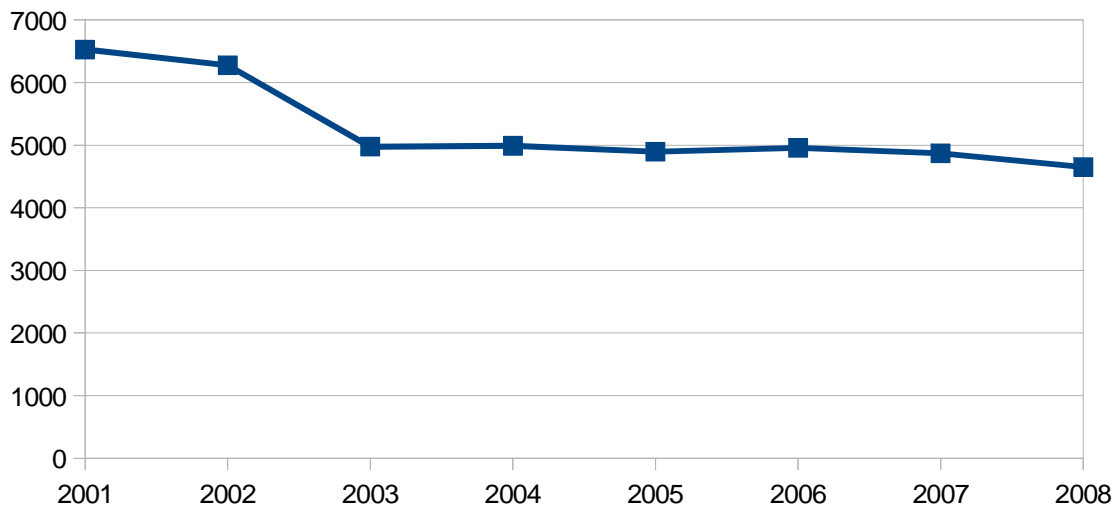


Figure 2: Turnover of Universal from 2001 to 2008 (in US\$ millions)

Source: Chantepie and Le Diberder (2010)

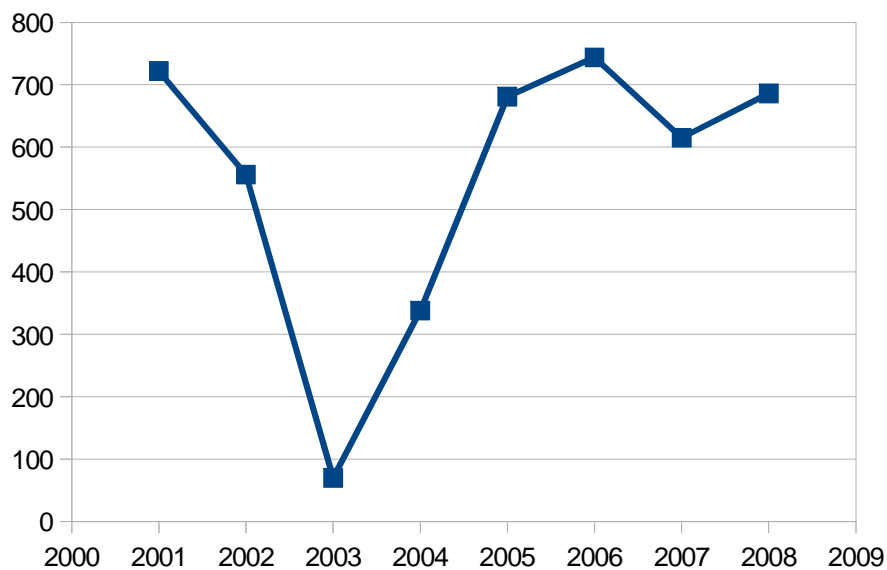


Figure 3: Profits of Universal (in US\$ millions)

Source: Chantepie and Le Diberder (2010)

The major record labels were not mistaken. It is true that they devoted considerable energy to lobbying governments for legislation to protect their profit margins on record sales and more generally on the physical or online sale of music. But they are also aware that the business model based solely on selling the right to listen to music is fast becoming obsolete, while new sources of income must be found in the development of concerts and shows¹ and spin-off products. This is the

¹ In this new model, the price elasticity of demand is weak and the fans of stars are prepared to pay (Krueger, 2005)

basis of the “Bowie hypothesis”: it is performance, not recording, that matters now.² As a result, the majors are converting to what are called “360-degree” strategies (Curien and Moreau, 2009). According to Bacache et al. (2009), at the end of the 2000s, 78% of artists³ were paid for concerts and shows, and these payments were the main source of income for 60% of them. Moreover, Bacache et al. (2012) show that for artists under contract, the tolerance to piracy increases with the proportion of income they earn from concerts. The music industry is gradually moving from a goods economy to a service economy, or even, with the development of streaming,⁴ from a selling economy to a renting economy.

It is new modes of production, distribution and consumption that form the foundation of the new business model now emerging in the music industry.

As far as intellectual property and copyright are concerned, despite appearances, the problem does not lie in the fact that songs can be reproduced at virtually no cost (and now, what is more, almost instantly and with no loss of quality). This possibility has already been available for a long time, since the development of analog magnetic technology for the general public (chiefly the cassette tape), and a broadly satisfactory solution had been found by taxing the sale of blank tapes, on the premise that they were essentially going to be used for the home taping of musical works. As these works could only be acquired by buying or borrowing a record or by taping from the radio, the distribution of the proceeds of this tax via an organisation like the SACEM in France (association of songwriters, composers and music publishers), in proportion to the sales and airplay of each artist, posed no particular problems. As long as the copying was done in a private context and between individuals, the problem was marginal and could easily be remedied by taxing blank tapes, and later MP3 players and CD engravers. Exchanging music between friends was a practice that lay within the limited framework of social networks (in the pre-digital sense of the term) and in the dimensions of individual record collections. The arrival of P2P, on the other hand, has introduced a vast capacity of diffusion between individuals who are completely unknown to each other, in which it is unprecedented. P2P is an exchange between one person and anybody else in the system, which means the almost complete certainty of finding and acquiring a copy of any song, however recent or obscure. In this respect, the connective power offered by the Internet moves the circulation of music onto another dimension.

The idea of a “global licence” proposed by some analysts, inspired by the taxation of magnetic tapes and consisting in charging all web users a flat-rate fee deducted at source with their internet subscription, raises other problems. Firstly because the distribution of the proceeds, even if they should be partly devoted to aiding creation, would be based on what already exists, i.e. on the sales/airplay performances of artists for what they are and not for what they are becoming. It is the domination of the box office, to the detriment of new artists who are just emerging or rising. As Vincent Frérebeau, manager of the new label *Tôt ou Tard* (<http://www.totoutard.com>) put it: “Who would still dare to invest in new talent?” (*Libération*, 18 June 2008). The global licence would reward those who have already succeeded and leave no room for creativity. It would simply reinforce the traditional conception of copyright. Secondly, the global licence would mean taxing all internet users the same amount, whether they are heavy or infrequent downloaders (which would then be an incentive to download excessively, which is not necessarily desirable), or even if they never download. With the power of diffusion generated by P2P, this is unlikely to be an acceptable

and 2006).

- 2 Professor Krueger says this tendency was spotted by David Bowie, who told the New York Times in 2002 that “music itself is going to become like running water or electricity”. Bowie has advised his fellow performers: “You’d better be prepared for doing a lot of touring, because that’s really the only unique situation that’s going to be left.”
- 3 Survey conducted in 2008 on a representative sample of 4000 members of ADAMI (association for the collective management of performers’ rights).
- 4 In the field of music as in other industries of content, such as film, for example, with the huge success of the American firm Netflix.

principle of fairness.

Returning to the issue of copyright, there is a fairly broad consensus that musical works cannot be considered as free and open products simply because their digitization makes their online exchange, and therefore their reproduction, cost-free and almost instantaneous. Their initial production is the result of human and material investment, the cost of which can legitimately be demanded by those who made it, if they so desire. The creative effort at the origin of the work cannot be denied on the grounds of free circulation to the benefit of consumer-listeners. One cannot make a simplistic analogy with open software: a piece of music is an “individual” work, not a creation that is constructed and improved over time thanks to the interactions of a large number of different people. There is no reason why artists who have invested their talent and efforts in a creative work should see that work being duplicated at will without being able to exercise any right to payment, unless they have chosen to do so.

The fundamental question is one of value. Where is the value? Who produces it? What role is played by the distribution, which is so often disparaged? If other services are provided, such as visibility, selection, or the organization of live shows, they contribute to the emergence of a new business model. We are witnessing the construction of new markets in which the methods of value creation have been transformed, and new networks of distribution, structured around distinct systems, including technological systems, funding, governance, etc.

In itself, however, the free circulation of a song, if approved by its creator, does not necessarily conflict with copyright and can even have an economic rationale. According to the survey by Bacache et al. (2009), while 58% of artists think that piracy has a negative effect on their album sales, 35% consider that the Internet has helped to boost the ticket sales for their concerts. A survey conducted in 2004 in the USA on 2700 artists and musicians (Madden, 2004 cited by Curien and Moreau, 2006) showed that 21% believed that P2P exchanges increased their CD sales, while 5% felt the opposite and two-thirds of them thought that P2P were no threat to the content industries. There is also the famous example of Radiohead, whose decision to make their songs freely available to download from the internet boosted subsequent sales of their album rather than reducing them.

In reality, it is very difficult to estimate the impact of illegal downloading on album sales. Two opposing theories predominate. One emphasises the sampling effect, which allows consumers to test products before buying them, while the other focuses on the substitution effect, whereby the downloaded product replaces the purchased one (Liebowitz, 2005). For the sampling effect to offset substitution, there must be a high level of differentiation between the two products, in terms of musical quality or complementary characteristics of the album (booklet, bonus tracks, etc). This explains the recent trend to produce more attractive album-objects and to reduce the price of physical albums. But there is no empirical evidence that the effect is sufficient to offset substitution.

And the fact remains that the consumers’ willingness to pay can be stronger than the free-riding behaviour predicted by economic theory, as Regner and Barria (2009) demonstrated in the case of the online music label Magnatunes.⁵

3 Jamendo and the Creative Commons

The path opened by the Creative Commons is an innovation in terms of intellectual property in tune with the emergence of these new business models, in that it enables the free but controlled circulation of works. Like the “open source” alternative in the field of software, it does not reject

⁵ These authors show that when consumers are invited to pay between 5 and 18 dollars for an album, they pay an average of 8.25 dollars – much higher than the minimum level and even above the sum of 8 dollars recommended by Magnatunes.

copyright, but proposes a new conception, a new form of management, which has been called “copyleft”, in contrast to copyright. Instead of the right to copy (or its prohibition), CC gives artists the right to determine the rights and obligations of those who use their work, either for consumption, or for the purpose of incorporating it into their own activities, whether or not those activities are commercial. The aim of these new and innovative legal tools is to define these rights and obligations by choosing the terms of the contract, by selecting from a spectrum of options ranging from the closure of classic copyright at one extreme to the abandonment of rights to the public domain at the other.

The Creative Commons covers a range of licences designed to allow artists to subject their creative works to less restrictive conditions than those of standard intellectual property rights. They were developed in the United States by a group led by the jurist Lawrence Lessig, specialist in constitutional law and intellectual property and professor at MIT (Lessig, 2004). Several platforms on the internet offer creators the possibility of posting their works under the Creative Commons regime (CC). In the field of photography, the site Flickr proposes CC licences to its artists, but allows them to choose a standard copyright solution if they so wish. YouTube also allows its users to attach a CC licence to their videos. In the field of music, on the contrary, Jamendo, which is the leading platform of “free music”, obliges its artists to use one of the forms of CC licence. Depending on national legislation, this choice of CC may conflict with the existence of part of the work under a standard copyright regime, which may compel Jamendo to refuse certain artists wishing to place some of their work under CC. In France, however, an agreement has recently been reached with the SACEM (society of music authors, composers and publishers), whereby members of the SACEM can place part of their work under CC, provided it is not used for commercial purposes.

The Creative Commons licences are constructed by combining four different elements, giving rise to six distinct regimes. These four elements are:



BY: this is the clause of recognition of authorship of the work. It is present in every CC regime, since the CC is an authorship management mode and an author cannot lay claim to other rights without this.



ND: (no derivatives) prohibits any modification of the work, which must therefore circulate in its original form.

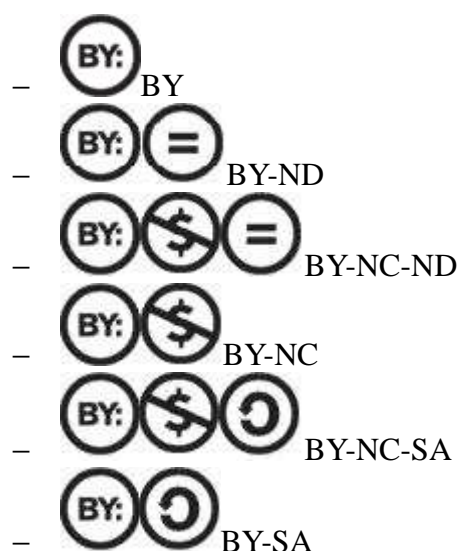


NC: (no commercial) prohibits any commercial use of the work without the express consent of the author. Free circulation of the work is therefore restricted to non-commercial use.



SA: (share alike) stipulates that all derivatives must keep the same status as the original.

Taking into account the incompatibilities between some of these basic stipulations (for example, one cannot have ND and SA, because the SA clause implies that the author accepts derivative works), the following six regimes are possible:



which constitute a range of variations between copyright and the public domain.

This is the alternative approach adopted by Jamendo (<http://www.jamendo.com>), website for the free legal downloading of music. This platform of “free” online music, created in 2005, operates on the basis of Creative Commons licences, under which artists choose the level of protection which they feel to be most appropriate, in particular as regards the right to modify the work or to use it for commercial ends. This is a whole new model that gives a legal dimension to the principle of the free circulation and sharing of musical creations on the Internet. It is both a new business model, whose viability is demonstrated by the dynamism of the company, and a new sociology of musical creation, in which the possibility of creating a “buzz” on the Internet allows artists to obtain greater visibility for their work without having to go through the record label system. The artists who so desire can receive payment for the commercial use of their songs thanks to the PRO service, through the sale of licences to professionals at very attractive prices.

The choice of the Creative Commons as the essential foundation of Jamendo should be understood in terms of its open nature. In 2009, Laurent Kratz, co-founder and CEO of Jamendo, explained:⁶ “When you typed *Madonna* in eMule, you found all her titles and even her naked photos, but when you typed *The Good Corner*, you found nothing”.

This approach places Jamendo in a context dominated by the economics of attention. With the arrival of the Web 2.0 and the platforms like MySpace which have welcomed musicians with open arms, there has been a spectacular increase in the supply of music, for which the statistical distributions of the audience are increasingly taking the form of long tails (Anderson, 2006), or even power law distributions. Although this new world does not cause the stars to disappear, for they remain central to the strategies and business models of the major labels, it does raise the problem of matching between this overabundant supply and the variety of consumers’ preferences. Whenever the Internet is discussed, the phenomenon of the buzz is mentioned. And yet in the strict sense of the term, in music or elsewhere, the buzz is a rare or at least very limited phenomenon, despite some famous examples like the French rapper Kamini (Basque, 2006; Grossman, 2006) or the worldwide success of “Gangnam Style” (Evers, 2012). The mechanisms of the “spontaneous”, self-organized buzz are clearly difficult to analyze, and they are often the result of improbable events.⁷ Far from being spontaneous, most buzzes are organized, under the impetus of record labels

⁶ Interviewed in Revue Terminal N°102.

⁷ In the field of the emergence of standards, Paul David (1985) already talked of the tyranny of small historic events. More recently, Nassim Nicholas Taleb (2007) introduced the notion of “black swans” to designate those highly improbable random events whose occurrence generates bifurcations that wipe out the projections of forecasters.

who manipulate Internet tools such as YouTube clips or word-of-mouth on social networks to launch new artists, often before they have even brought out their first album.

In this context of long tail distributions, the meeting between musicians and their audiences is crucial, and the tools proposed by the platforms hosting these artists play a central role. MySpace, which was a pioneer in the open reception of musicians, soon found itself constrained by the lack of available tools. In other fields, like photography, with the example of Flickr (Cha et al., 2009), social networks have been attributed a key role in building the reputation of artists. In the field of music, Jamendo has adopted this same rationale of consumer-recommenders, based on the publication of listeners' favourite works, and combined it with other tools like theme-based radio shows and "front-page" publications. Like the streaming sites Deezer and Spotify, these new actors of music on the Internet do not want to be simply broadcasters: they also want to play a role in structuring the audiences of artists (Benghozi and Paris, 2007). It is easy to understand how they can be positioned not only as partners but also as competitors of the record labels.

4 A survey of artists on Jamendo⁸

From this perspective, the online survey of musicians on Jamendo brings to light some interesting results. For example, 67% of artists declared that they had chosen Jamendo because it uses the Creative Commons. This predominant motive comes far ahead of all the others, even Jamendo's capacity to create a buzz, which is mentioned by 40% of artists and is one of the main motives of its founders. The Creative Commons regime is then a natural way to generate an effective buzz based on the free circulation of songs. This tendency against exclusivism in terms of copyright is strongly corroborated by the motives declared by artists for their choice of Creative Commons (linked to the choice of Jamendo). Only 22% said that they chose CC because it is imposed by Jamendo and only 20% because it is useful for creating a buzz. In contrast, 60% of respondents chose CC because it corresponds to their view of sharing and more than 50% because it is a good way of developing the world of musical creation. So a large majority of our sample fully concur with the underlying principles of Creative Commons.

The results presented here were obtained from a sample of 780 artists (solo musicians or groups) who are members of Jamendo. The survey was implemented on the internet with the help of "Lime Survey", a free, web-based survey tool.⁹ It is not possible to assess the representativeness of the sample as there are no figures available of the population from which it is drawn. Furthermore the sample was obtained from responses to a survey questionnaire circulated to artists on Jamendo rather than through targeting a representative, pre-selected sub-population. Nevertheless the information contained in the responses can be regarded as being useful in itself.

Our sample of artists is composed of 509 solo artists (66%) and 258 groups (34% of the population). Thirteen artists did not answer the question about how many people were in their group. 88% of these groups have between 2 and 5 members. In terms of age (average age of the group members), the population present on Jamendo is quite young, with a peak between 25 and 35 years old. This distribution profile is the same for solo artists and groups. It can also be noted that the proportion of groups is highest among the young (40% between 21 and 25 years old, 45% between 26 and 30, and 44% between 31 and 35) and much lower among the very young (21% of the under 20-year-olds) and older artists (8 to 30%). Geographically, our sample is quite strongly centred on Europe, especially Western Europe and France. Nevertheless, 25% of the sample is located outside Europe, with 17% in the Americas and 17.5% in Central or Eastern Europe. Two

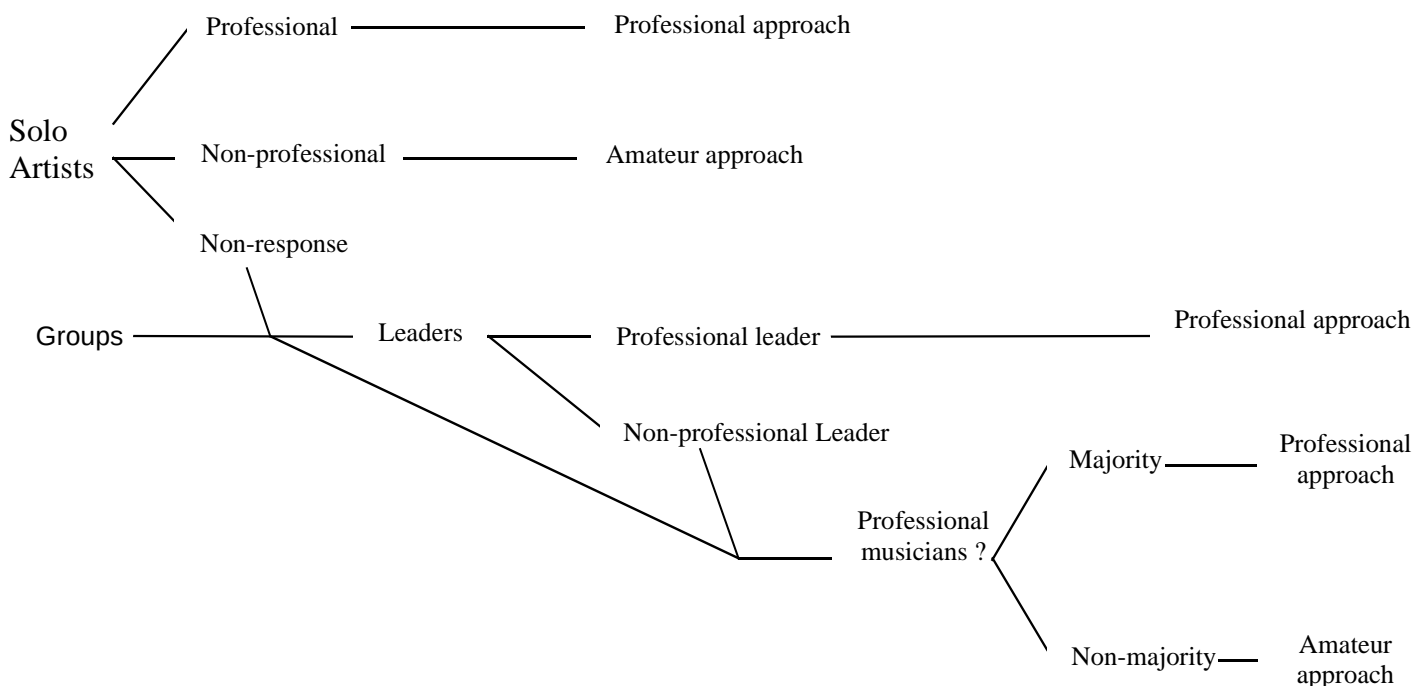
⁸ The survey presented here was conducted in a cooperative project between GREQAM (economics research unit of CNRS/Aix-Marseille University) and Jamendo, within the framework of the research programme PROPICE with the support of the French ANR (Agence Nationale de la Recherche). <http://www.mshparisnord.fr/ANR-PROPICE/>

⁹ <http://www.limesurvey.org/>

types of music are largely predominant in our sample: “electronic music” is played by 47% of the artists and “Pop-Rock-Reggae” by 39%, bearing in mind that each artist may declare more than one type of music. Solo artists are more numerous than groups over the whole sample, and this tendency is present in every type of music except the category “Pop-Rock-Reggae”, where 53% of the artists are groups. In the other categories, the proportion of solo artists varies from 62% to 86 % with a peak in “classical music” (86%) and “electronic music” (84%). This last type of music, which is also the most frequent in our sample, is probably the one that lends itself best to working alone, not requiring any particular space like a studio or rehearsal room, and easily uploaded to the internet because of its inherently digital nature. Quite logically, these two categories also play a symmetrical role in the concentration of the two types of artists, since “electronic music” accounts for 60% of solo artists (and only 23% of groups), while “Rock-Pop-Reggae” accounts for 62% of groups (and only 28% of solo artists).

We now turn to the attitude these artists have towards their activity. To put it briefly, is the music for which they are present on Jamendo related to a professional activity or project, or is it, on the contrary, more of a hobby with no profit-making intent? We then analyse whether or not the activity is of a professional nature. One question concerned the presence of professional musicians among the artists. From this, we learn that 9% of solo artists are professionals and that 23% of groups have at least one professional member. This question was not answered by all the artists in our sample (78% of the solo artists and 95% of the groups). Based on the answers to several questions, we have built a decision tree (Figure 4) that sheds further light on whether the artists in our sample have more of a professional or an amateur approach. In this tree, we start by considering the solo artists. Those who declare themselves to be professionals are assigned to the professional approach, and the others to the amateur approach. We then look for the presence of leaders in the groups. If there is a leader, and he or she is professional, these groups are also assigned to the professional approach. Then, for all the groups with either an amateur leader or no leaders, we look at whether the other members of the group are professional or amateur. If the majority of members are professional, we classify the group as professional, otherwise it is assigned to the amateur approach.

Figure 4 : Artists’ decision tree



Over all, slightly less than 20% of the artists in our sample are professional musicians. Firstly, as regards solo artists (n=509), the share of professionals (18.5%) varies according to age, from 15% (for those aged less than 25) to 35% (for those aged 51-55), but only 18 to 20% for those aged between 25 and 50. Now turning our attention to the groups (n=258), the overall share of professionals is 22%. This share varies between 0 and 100% according to age range, but lies between 14 and 22% for the 20 to 45 year-olds, without any clear pattern emerging.

Less than 30% of the artists in our sample sold CDs and just over 10% sold other merchandise. This confirms the distinctly internet-based and dematerialized orientation of the majority of artists in our sample. However, this proportion varies considerably with the category of artists. Groups are far more likely to sell CDs (52%) than solo artists (18%), and solo professionals far more (38%) than solo amateurs (13.5%) (here, the difference between amateurs and professionals only concerns solo artists).

To return to the motives that led musicians to choose Jamendo and the Creative Commons regimes, 75% of those who chose Jamendo because it uses CC describe CC as corresponding to their view of sharing and 64% as a good way of developing the world of musical creation. As for the choice of licence, three regimes largely predominate in our sample, accounting for more than three quarters of artists' choices. The most popular choice is the simple regime of recognition of authorship (27.35%). 7% did not mention a licence type (but these artists must have at least BY). The two other dominant regimes combine the no-commercial and no-derivative clauses (26.65%) and the no-commercial and share-alike clauses (23.28%). The other regimes are far less frequently chosen, displaying a sort of split in our sample between slightly more than a quarter of the artists who wish to erect the fewest possible barriers to the circulation of their work (BY) and half of the artists who choose more elaborate strategies, to protect their work against any unauthorised commercial use and to maintain its status, whether or not they allow derivative works. All in all, more than 55% of the artists choose a non-commercial status for the circulation of their work.

However, there is quite a strong demarcation between professionals and amateurs as regards the choice of licence, and this divide is more pronounced for groups than for solo artists (see Figures 5 and 6). The BY-NC-ND is chosen far less often by professional groups (14.3%) than by amateur groups (30.2%), which is not the case for solo artists (25.5% and 22.4% respectively). For the third dominant status, BY-NC-SA, the opposite can be observed, with professional groups choosing this status slightly more often than amateurs (25.0% and 21.3% respectively), while solo professionals choose it less often than solo amateurs (11.7% and 22.9% respectively). This shows that the distinction between professionals and amateurs, added to that between groups and solo artists, plays a significant role in determining CC choices.

Figure 5: Creative Commons option choice for solo artists
(% of amateurs or professional solo artists)

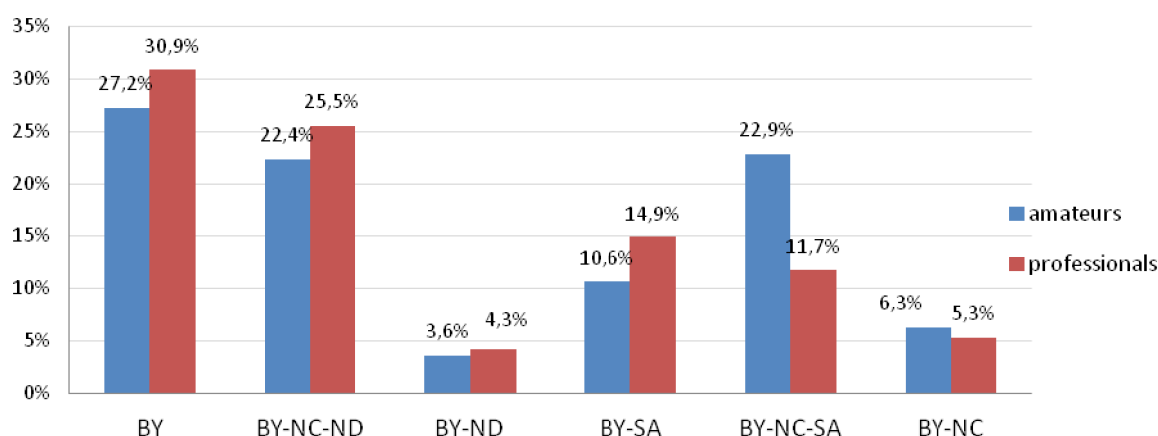
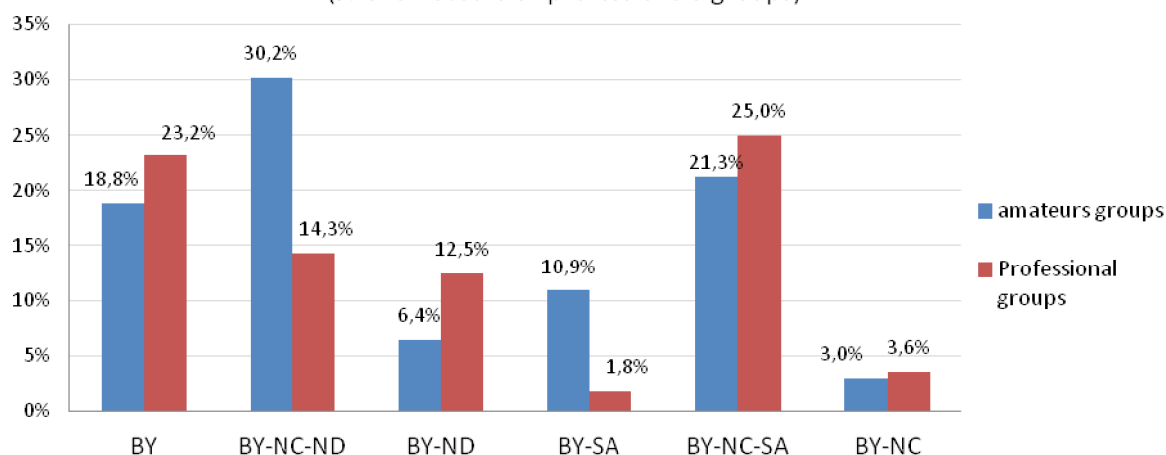
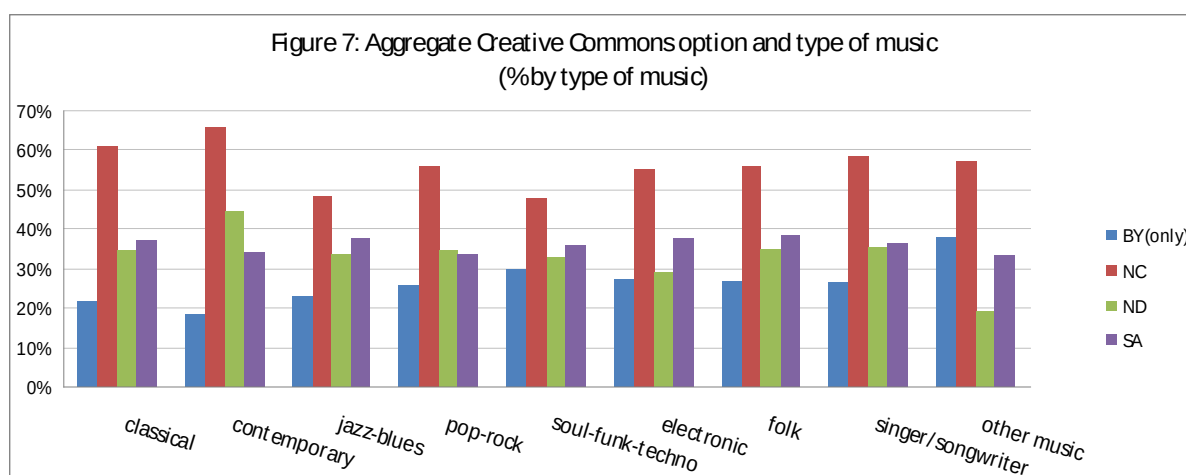


Figure 6: Creative Commons option choice for groups
(% of amateurs or professionals groups)



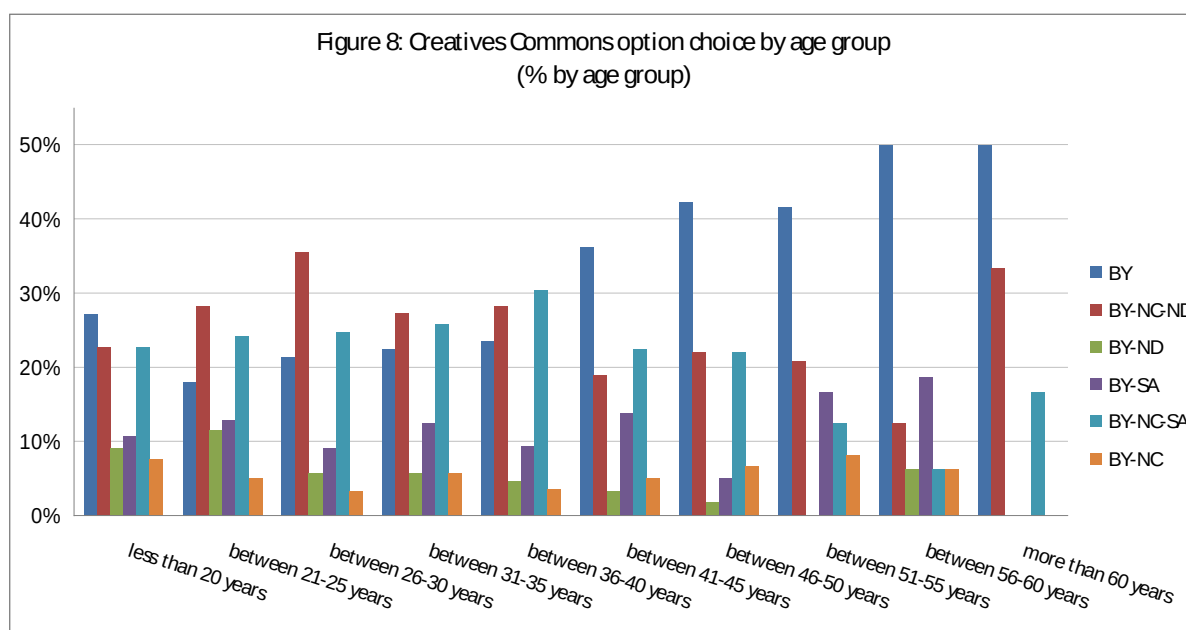
Across the types of music, we naturally find similar distributions between CC regimes and between the basic clauses, with some fairly insignificant variations (see Figure 7).

Thus, the three dominant regimes appear in nearly every type of music, with a few peaks and variations. Setting aside the category “Others”, which is quantitatively insignificant, the share of the simple BY regime varies between 18 and 30%, with the highest values for “Soul-Funk”. Choice of BY-NC-ND regime varies between 24 and 30%, but with a peak of 40% for “Contemporary”. Choice of the BY-NC-SA regime varies between 18 and 28% of artists, reaching a maximum for “Singer-songwriter”. It is then interesting to examine the distribution of the basic clauses across the different kinds of music.

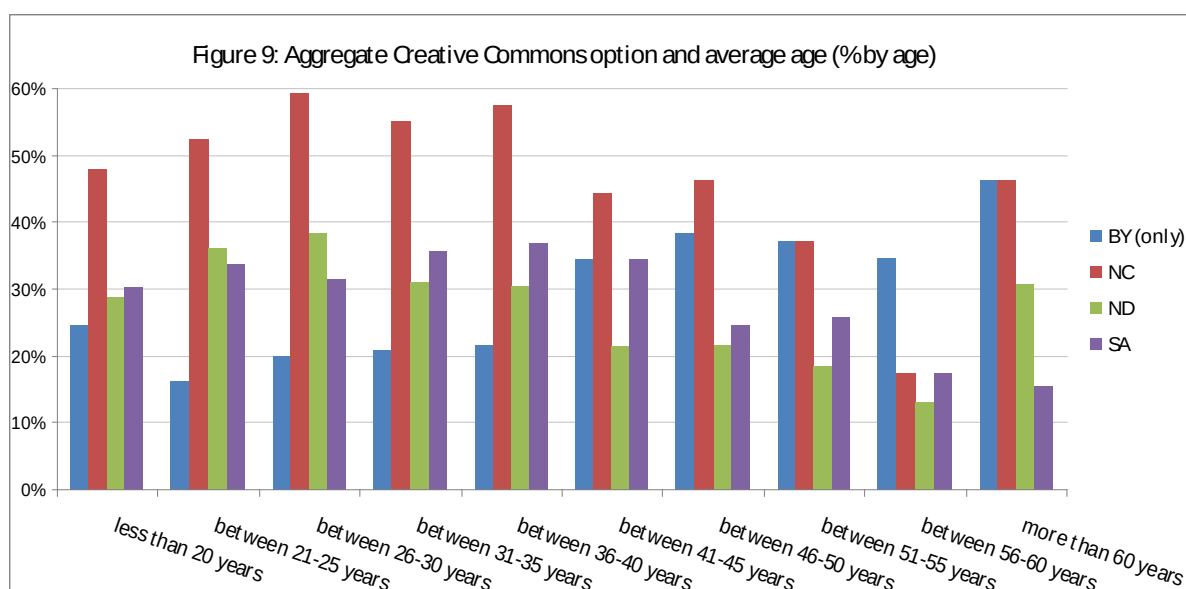


The kind of music does not appear to have any significant influence on the choice of clauses, with quite similar profiles across the board. Still setting aside the category “Others”, NC varies between 48 and 66%, ND varies between 29 and 36% (with 44% for “Contemporary”), and SA varies slightly less, being chosen by between 34 and 38% of artists.

As far as the artists’ ages are concerned, on the contrary, the distributions of licences vary considerably between different age ranges (Figure 8).

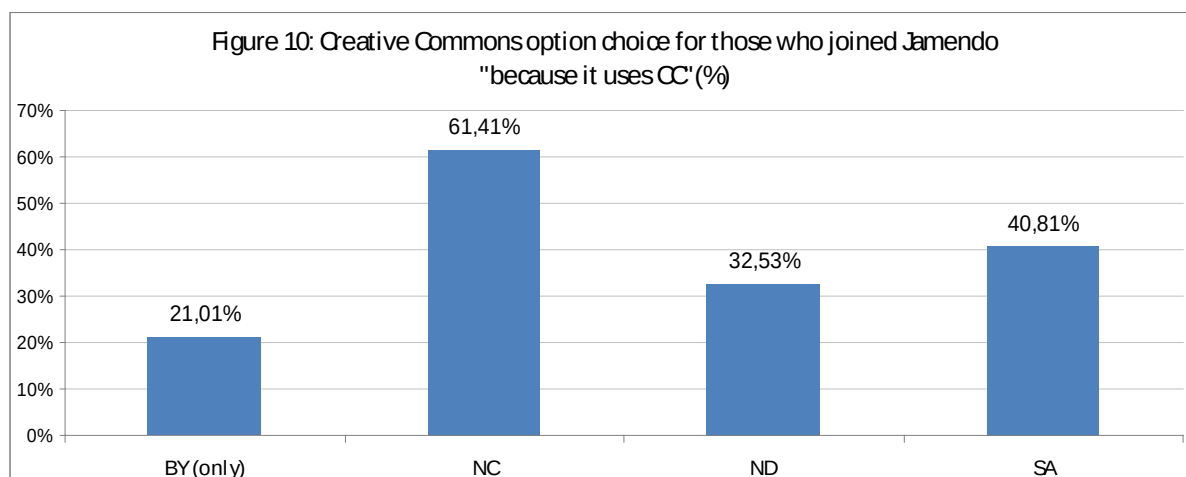


The first observation we can make concerns choice of the BY clause alone, which increases with age (from 18% among the 21-25 year-olds to 50% among the over 55 year-olds), except for the youngest artists (27% among the under 20 year-olds). For the two other dominant regimes, and omitting the over 60 year-olds, who are too few in number, the distribution looks quite normal, with a peak among the 26-30 year-olds for the BY-NC-ND licence (36%) and among the 36-40 year-olds for the BY-NC-SA licence (31%). These observations suggest that the demand for copyright is relatively low among the very young and decreases with age, while the more precise desire to control the future of their works is more pronounced among young but more mature artists (in a nutshell, the 25-40 year-olds).



This analysis is strongly corroborated by the distribution of basic clauses by age range (Figure 9). The NC clause is chosen by more than half the artists under 50 years old (with the exception of the 41-45 year-olds, at 47%) and then falls away, while the ND clause reaches its peak among the 20-30 year-olds (40-41%) and the SA clause reaches its peak among the 30-40 year-olds (38-40%), suggesting that the former attach more importance to preserving the integrity of their works and the latter to maintaining its status.

These observations are consistent with those obtained by comparing the distribution of choices of basic clauses in the total population (see above) and in the subpopulation of artists who chose Jamendo because it uses CC (Figure 10).



What is striking is that this subpopulation is less likely to choose the BY clause (21.01% versus 27.35%), more likely to choose the NC clause (61.44% versus 55.54%), is similar in terms of the ND clause (32.53% versus 32.12%), but is more concerned with maintaining the same status for their work with the SA clause (40.81% versus 34.92%).

Thus, the choice of another regime than the simple BY displays the artists' sensibility with regard to the use of their works and the way they are shared, with greater reluctance among the 20-30 year-olds to allow derivatives (sharing of unaltered works) and a more pronounced interest among the

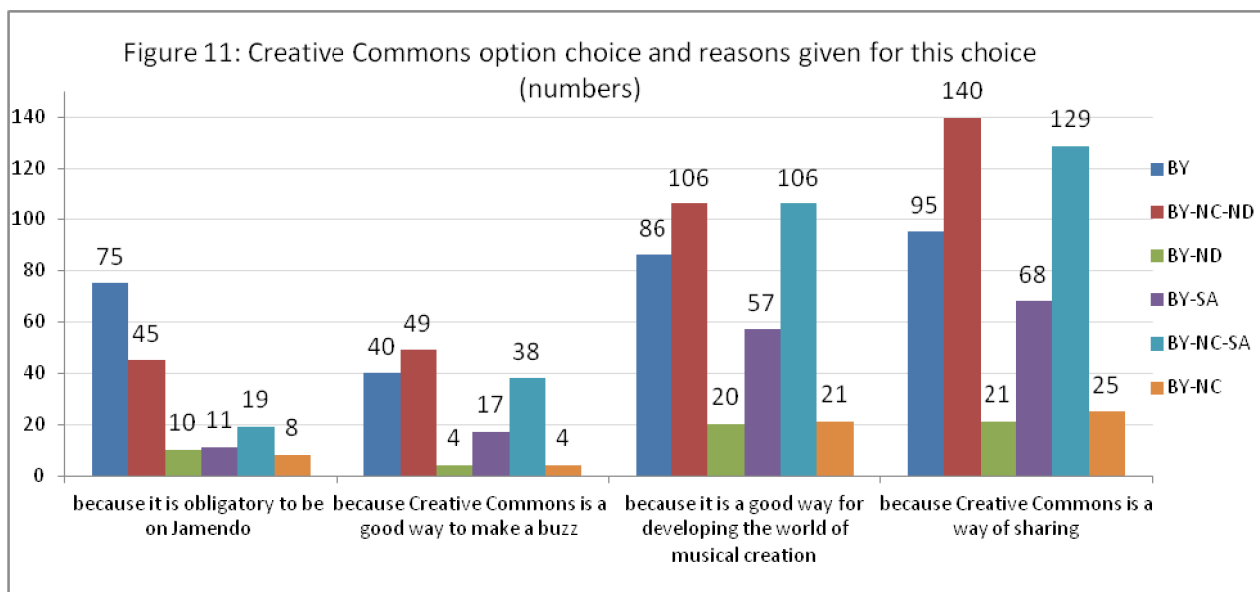
30-40 year-olds in the preservation of their status (and therefore greater interest in CC).

We are now in a position to characterise a dominant type for each age range, as follows:

- Under 20 year-olds: no dominant type; concerns are shared over circulation, integrity and status;
- 20-30 year-olds: non-commercial circulation of their works, but preserving the original form;
- 30-40 year-olds: non-commercial circulation and possible use of derivatives, but preserving the regime;
- Over 40 year-olds: the concern with circulation increases with age.

Lastly, it is interesting to combine regime choices with the reasons given for choosing CC (Figure 11).

The choice of simple BY regime is only dominant (45%) in the subpopulation of artists declaring that they chose CC because it is imposed by Jamendo, while in the other categories the simple BY regime does not exceed 20 to 25%. As for the BY-NC-ND regime, which focuses on the integrity of the work, it is chosen in similar proportions in all four categories of reason for choosing CC, with a slightly higher value (32% versus 27 to 29%) among those who chose CC for its buzz potential, these two categories (necessity and buzz) corresponding to artists who have a more “individualistic” approach to the circulation of their work.



Conversely, the desire to share while maintaining the same status for their works, signified by choice of the BY-NC-SA regime, appears to be stronger among the “Development” and “Sharing” categories which represent a more “collective” approach, closer to the notion of common good. The BY-NC-SA regime accounts for 27% of the choices in these two categories, strengthened by a share of 14% for the BY-SA regime, bringing the total for the SA clause to 41% of artists (compared with 18% for “necessity” and 36% for “buzz”).

5 *How do artists choose a CC licence?*

5.1 *Logit estimates*

In this section, statistical techniques are used as a means of establishing the main factors that influence the choice of Creative Commons licence. The nature of the technique used is described in the appendix. There are six types which combine different clauses – commercial use permitted or not (NC), modifications permitted or not (ND), and in the case where the commercial use and/or modifications are permitted, the same rights that apply to original piece of music also apply (SA). In fact two of the six combinations are little used by the artistes responding to the questionnaire. In view of the sample size, a first approach looks at the main types of protection that Creative Commons offers: minimum property rights (called BY only), NC and ND and these are treated separately. This is followed by a more delicate analysis of the determinants of the choice of the combinations of these. The results obtained from this second approach are not likely to be as robust.

a. *BY Alone*

The first model examines the factors linked to the choice of minimal property rights (the choice of BY alone) – in other words, artistes have decided not to restrict use of their music for commercial use or the form in which it is used. This is the case for 34% of our sample¹⁰. The coefficients of the logit model (a) indicate whether the associated variable or characteristic influences this choice and (b) are proportional to extent to which the probability changes when the variable in question rises by one unit. Most of the explanatory variables take the form of dummies and in this case the exponential of logit coefficient provides a measure of the effect of changing an artist's profile on the probability of choosing minimal property rights.

The first model (column 1 of Table 1) examines the role of artist characteristics such as country of residence, type of music, age, composition and functioning of the group, use of publicity and whether artist distribute their music through other forms other than online through Jamendo. Very few characteristics stand out on the basis of conventional statistical significance criteria, although this is partly related to the sample size. The most significant are the positive influence of the average age of the group. Older artists are less likely to restrict use of their music. The main negative influences are jazz players and artists that have their own blog. All of the remaining variables have no statistically significant influence on the choice of minimal property rights.

The second and third models augment the first by adding successively the reasons given for joining Jamendo and whether the group earns income from their music from Jamendo or other sources (column 2) and the reasons given for choosing a creative commons (CC) licence rather than another form of property rights (column 3).

Along with the aforementioned significant factors (average age, having a blog and playing jazz), groups having chosen the Jamendo Pro option are less likely to choose the 'BY' only licence. The same is true for those stating that one of the reasons for joining Jamendo is the use of Creative Commons. This suggests that joining this community is the result of having given consideration to the issue of how the music is distributed and not simply singing up to website where music can be downloaded. Groups having joined for Jamendo because of the large number of artists already using the site are more likely to opt for minimal property rights as are those playing soul music.

Adding in the reasons for choosing the Creative Commons as a form of property rights reveals two further important factors: artists stating that they chose CC as a means of sharing and in order to

¹⁰ For the econometric analysis we merged the people that didn't answer to the question about the type of licence they chose with those who answer they chose the minimal BY-alone protection. This represents 34% of the population while the BY-alone category understood in a strict meaning represents only 27%.

promote the development of musical creativity were much less likely choose minimal property rights. Furthermore the significance of using CC as a reason for joining Jamendo is reduced. Again, the results suggest that artists make a considered decision when choosing a CC licence. This in turn is related to the notion of contributing and sharing the fruits of their talent in well-defined manner (with limits on the way in which the music is used, whether a piece of music can be used in a modified form and if so on what terms).

b. NC

These choices are also analysed using the logit approach. Through the choice of CC licence artists can prevent their music being used for commercial gain (in the CC jargon this is through the choice of a licence involving NC). There are three licence types that forbid commercial use: NC on its own, NC with no modifications permitted (ND), or NC with the share-alike (SA) restriction, which means that anyone modifying a piece of music must also respect the same terms as those for the original piece. In the following logit analysis these three are treated as a single category, and so the model seeks to establish factors that determine the probability that a licence containing the NC clause is chosen (which is the case for 37% of the sample). The same explanatory variables used for analysing the choice of minimal protection only are used, and in the same sequential fashion. The results are presented in Table 2.

In terms of the variables representing an artist's profile, four significant factors are associated with the choosing the no commercialisation clause (Table 2 column 1). Older musicians tend not to limit the use of their music to non-commercial purposes only. Groups are more likely opt for the NC clause than solo artists and jazz musicians prefer it more than those playing other forms of music. The greater the number of albums, the more likely an artist on Jamendo is to choose the NC clause. Adding income and reasons for joining Jamendo reveals two additional significant influences. Those stating that they joined because it uses the Creative Commons are more likely to opt for a licence with NC applied, while somewhat unexpectedly artists indicating that at least one of the reasons they joined Jamendo was as a means of earning money are less likely to opt for NC.¹¹ Groups having chosen the Jamendo Pro option are more likely to choose an 'NC' licence.

Augmenting the model with variables related to the reasons for choosing the Creative Commons, brings out an interesting conclusion. The choice of a licence containing the no commercialisation clause is not in fact related to joining Jamendo because it uses CC, but is more to do with the reason for choosing the Creative Commons scheme. artists stating that CC was chosen as a means of sharing and in order to contribute to the development of musical creativity are far more likely to opt for the 'no commercial use' clause.

A final set of logit estimates is provided in Table 3 for the probability of choosing a licence with the 'no derivatives' (ND) restriction. This option means that a piece of music can be used but only in its original form; it cannot be modified. It is chosen by 29% of the sample. There are three aspects of a group's profile that influence the probability of choosing the ND clause in a statistically significant manner (see Table 3 column 1). Older artists tend not to use it, while those playing Contemporary music and Italian artists are more likely to apply it. The inclusion of other variables reveals further significant factors (column 2). While the presence of income has no influence, among the reasons for having joined Jamendo there are three significant influences on the probability of choosing the ND clause. Those having joined in order to earn money are more likely to opt for it while those stating that include the creating a buzz and the presence of a large number of artists were the reasons are less likely to choose a licence containing the ND clause. Finally, when the reasons for choosing the Creative Commons are added, it found that those who state that they did not choose Jamendo for the CC and consider the use of CC to be obligatory are more likely to choose the ND

¹¹ This surprising trend could be the result of a misunderstanding of the NC clause.

restriction. The same is true for those who consider that the CC is a means of sharing.

Figure 12 summarizes the significant influences determining the choice of main types of CC licence. The main conclusion is that very few of the variables used in the equation turn out to be statistically significant influences. There are hardly any differences by country or by musical type (except for jazz and contemporary). The use of other forms of distribution of music does not affect choice of the Creative Commons licence. There are, however, two factors that are common determinants for the three choices examined: the average age of the group and stating that the Creative Commons form of artist protection was chosen as a means of sharing. There is a logical opposition in the signs of these variables among the choices (this is automatic for the sign of the coefficient but the effect may not be statistically significant in both cases). A variable that has a positive effect on BY only will have a negative effect on choosing NC and/or ND. This opposition is especially present when comparing BY only with the choice of an NC licence. Jazz musicians stand out in their preference for no commercial use of their recordings as do those choosing the Jamendo Pro option and chose Creative Commons as a means of developing musical creativity. Opposite effects between the choices ND and BY only are found for joining because of the large number of artists already present on the site (in addition to age and the choice of CC as a means of sharing).

Figure 12 Summary of the key influences on the choice among the main forms of Creative Commons licence		
BY alone	NC in any form	ND (with or without NC)
	Positive influences	
Age	Jazz	Contemporary
Chose Jamendo for number of artists	Number of albums	Chose Jamendo to earn money
	Chose Jamendo for CC	CC obligatory on Jamendo
	Chose CC for purpose of sharing	Chose CC for purpose of sharing
	Chose CC for development of musical creativity	Italian
	Jamendo Pro	
	Negative influences	
Jazz	Age	Age
Have blog	Soloist	Chose Jamendo for buzz
Jamendo Pro		Chose Jamendo for number of artists
Chose CC for purpose of sharing		
Chose CC for development of musical creativity		

5.2 Multinomial logit estimates

The binary logit models are useful as a first approach to analyzing what lies behind the choices made, but are limited in the sense that all choices that are *not* the one being studied are aggregated into a single alternative. However, while a full analysis of the determinants of the choice among the

six possible licence types involving different combinations of NC, SA and ND is desirable, for some of these there are very few adherents (see Table A.1). These small sample sizes prevent the estimation of a full set of coefficients for certain choices. There are two licence types which have sample sizes of forty or less : BY-NC-ND and BY-SA. The former is most complete form of protection available to artists, while the latter simply prevents someone who uses and/or modifies the music from attaching constraints on its use. In proceeding to a multinomial logit analysis it is necessary to group each of these licence types with one of the others. In what follows, BY-SA is associated with BY ONLY, since the alternative grouping with BY-NC-SA adds a much stronger form of licence protection, which the adherents have clearly chosen not to impose.

The choice of BY-NC-ND could be associated with BY-ND or BY-NC. The first of these stipulates that the music must not be used in a modified form, while the second prohibits commercial uses. In order to bolster the sample size, this choice is grouped with those having opted for BY-NC, although this may not be the dominant element in the choice made by the artist. The choices are modelled as alternatives available with no implicit or explicit hierarchical structure, meaning that an artist does not first decide on NC or not and then whether to add ND or SA.

The full details of the results are not presented here since there are over a hundred parameter estimates. In Figure 13, the statistically significant parameter estimates are singled out (where in this case a 10% level of significance is applied). A positive influence is considered in relation to the BY ONLY default choice : in other words, an artist is regarded as having made a considered choice concerning licence status rather than opting for the default. Thus in the first column, French and Italian artists are more likely than other nationalities to choose BY-ND over BY ONLY. Age is another significant factor in the sense that older artists are less likely to make a considered choice among the various possibilities and a tendency to opt for the default licence. Other influences affecting the choice of BY-ND over the default are artists producing contemporary music, having their own websites or blogs, and not deriving income from their music. The ND restriction permits the diffusion of the music only in its original form and the artist would appear to have chosen this type of licence because of the reasons for choosing the Creative Commons: as a means of creating a buzz, for the development of musical creativity and for sharing. In addition those who cite the obligation to use the Creative Commons when joining Jamendo also tend to choose this option over the BY ONLY default licence. Influences that militate against this option in favour of the default are those saying they joined Jamendo itself to create a buzz or because of the number of artists on Jamendo. The BY-ND licence is chosen by just under a quarter of respondents.

The next type of licence, BY-NC-SA, is a choice preventing commercial use but allowing the music to be modified so long as it is for non-commercial purposes. This form of licence was chosen by just over 20% of respondents. While nationality and type of music have no systematic influence, being a solo artist or having joined Jamendo as a means of earning money reduce the likelihood of choosing BY-NC-SA over the BY only licence. On the other hand, having joined Jamendo because it uses the Creative Commons or being a member of Jamendo-Pro both increase the probability of preferring this licence to the default. The same is true for artists having their own blogs and having produced a relatively large number of albums. One of the significant positive influences behind the choice BY-NC-SA is linked to the reasons for choosing the Creative Commons. This is especially true for those citing the Creative Commons as a means of creating a buzz, because it contributes to creativity or because it is a good way to share music.

The last form of licence is the hybrid BY-NC and BY-NC-ND, which prohibits commercial use and possibly modifications. It is chosen by just over 15% of respondents. This option is favoured by younger musicians and groups (rather than solo artists), and those who have their own blog. Adherents to Jamendo-Pro also prefer this option to the default BY ONLY licence. The interesting finding is that this is the preferred option of those producing jazz recordings. The no commercial use clause also corresponds to the reasons advanced for using the Creative Commons : for the purposes of sharing and developing musical creativity.

These multinomial logit estimates highlight certain factors that influence the choice of a particular type of licence. Factors that are significant and common to all three licence choices, relative to the default, are age (younger), having a blog and when the reasons choosing the Creative Commons are sharing and the development of creativity. Adhering to Jamendo-Pro and being in a group rather producing music as a solo artist are factors influencing the probability of choosing the no commercial use option.

Figure 13 Summary of the key influences on the choice among the main forms of Creative Commons licence relative BY ALONE or BY-SA based on multinomial logit estimates		
BY-ND	BY-NC-SA	BY-NC or BY-NC-ND
Positive influences		
French	Own Blog	Jazz
Italian	Number of albums	Own blog
Contemporary	Chose Jamendo for CC	Jamendo Pro
Website	Jamendo Pro	Chose CC for purpose of sharing
Own Blog	Chose Jamendo for buzz	Chose CC for development of musical creativity
Chose CC because it is obligatory on Jamendo	Chose CC for buzz	
Chose CC for buzz	Chose CC for purpose of sharing	
Chose CC for purpose of sharing	Chose CC for development of musical creativity	
Chose CC for development of musical creativity		
Negative influences		
Age	Age	Age
Reason for joining Jamendo : Buzz	Money	Solo artist
Reason for joining Jamendo : Numbers	Solo artist	
Income		

6 Conclusion

Jamendo hosts a wide variety of artists, in terms of both musical styles and ages, who share an internet culture showing an aptitude of the artists in our sample to shift towards a new model of musical creation.

On a more economic level, two populations with distinct economic approaches – amateur and professional – coexist on this platform, contrary to the popular belief that Creative Commons would only concern people who practise an artistic activity as a hobby. The chief distinction between these two populations is that the amateurs have no pressing need to generate income, especially since the cost of producing albums has fallen considerably and the other costs incurred (publicity, travel, organising concerts, etc.) have little bearing on their presence on Jamendo. For the professionals, on the contrary, the question of income determines the viability of their artistic activity, even if other sources of income (concerts and album sales, of course, but also teaching, commercial services, etc.) make a decisive contribution in compensating for an unprofitable creative activity. For the professionals, the different elements of the budget cannot be separated; they form a global budget in which some items help to make up for others.

Although the majority of artists on Jamendo are amateurs, the category of professional musicians represents a non-negligible minority, accounting for 22% of the groups and 18.5% of the solo artists. This is all the more important since their decision to place their works under a CC regime is often incompatible with membership of a society for the collection and distribution of royalties under standard copyright law. However, we observe a demarcation between professionals and amateurs in terms of choice of licence. As regards the two dominant licences other than the simple BY regime – BY-NC-ND and BY-NC-SA – this distinction operates in inverse proportions between professional musicians and groups.

More precisely, one might imagine that the choice of Jamendo would be driven by the desire to reach a wider public, by generating a buzz on the internet, but this motive is only given by 40% of the artists (although this does represent an important share of our sample). What we find striking is that the dominant motive, given by 67% of our respondents, is that of the CC regime imposed by Jamendo. In confirmation of this tendency, 60% of the artists feel that CC corresponds to their view of sharing and 50% believe that CC is a good way of developing the world of musical creation. Clearly, the majority of artists in our sample agree with the underlying principles of CC.

The econometric study refines this analysis by considering the active attitude of musicians towards the choice of CC. Firstly, if we look at the minimum regime of BY only, which is chosen by 34% of our sample, the first logit model shows that the artists who chose to benefit from Jamendo Pro were less inclined to chose this option, as were those who joined Jamendo because of the use of CC. This suggests that for these artists, joining Jamendo is driven by an explicit attitude towards the mode of circulation supported by CC. And this tendency is also observed among those musicians who consider CC to favour sharing and creativity. This same part of the sample also makes greater use of the NC clause, either because of a direct desire to control the commercial use of their songs (for those who are members of Jamendo Pro) or, for the others, especially those motivated by the principles of sharing and creativity, because CC does not represent a negation of rights (in particular commercial rights), as the public domain would. This suggests that CC could form the foundation of an alternative business model, although this latter remains to be defined. Lastly, if the choice of the ND clause is positively influenced by the motive of joining Jamendo to earn money, it is also more likely to be chosen by those who consider CC to be a good way of sharing.

The multinomial analysis supports these conclusions, insofar as choosing a regime different from the BY-only and BY-SA licences can be interpreted as evidence of a well thought-out attitude towards CC. This is clearly the case for artists having their own blog, who have probably invested

in the Internet as a mean of music diffusion. It is also the case for people choosing CC as a good way of sharing or to favour musical creativity. These artists, carrying a new vision of musical creation, do not opt for a simple laissez-faire approach but make a well-considered choice of the most appropriate CC licence.

Ultimately, we believe that this survey confirms the idea that CC can become the driving force behind a transformation in the world of musical creation. In a complementary manner, the presence of professionals on this platform, although still rather weak, suggests that this ongoing development does not represent a de-professionalization of this world, but a new business model in the process of emerging.

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Table 1 Binary Logit Choice of Type of Creative Commons : Probability that BY=1 (unconditional : 0.34) (BY Alone)			
	(1) Correct predictions 67%	(2) Correct predictions 74%	(3) Correct predictions 79%
Constant	-19.61***	1.67**	12.38***
Country			
France	-0.35*	-0.21	-0.24
Germany	-0.36	-0.25	-0.18
Spain	-0.47*	-0.55*	-0.51*
Italy	-0.53*	-0.33	-0.33
Characteristics			
Age	0.043***	0.036***	0.034***
Solo artist	0.30	0.28	0.35
Students	0.42*	0.35	0.34
Year created	0.009	-0.004	-0.006
Musical style (ref: Rock and Pop)			
Classical	-0.07	-0.002	-0.04
Contemporary	-0.33	-0.36	-0.50
Jazz	-0.57**	-0.55*	-0.44*
Electronic	-0.14	-0.09	-0.07
Folk and Country	-0.05	0.11	0.08
Soul	0.49*	0.60**	0.44
Other	-0.15	-0.05	-0.12
Publicity			
Other sites	-0.11	-0.17	-0.16
Own web site	-0.34*	-0.25	-0.14
Own blog	-0.37**	-0.38**	-0.51***
Functioning :			
Leader(s)	0.04	-0.11	-0.17
Professional	0.58*	0.57	0.32
Output			
Albums	-0.06*	-0.03	-0.02
Concerts	0.004	0.004	0.005
Merchandise	-0.17	-0.24	-0.06
CD sales	0.16	0.17	0.10
Receives income		-0.07	0.18
Income from Jamendo			
Publicity		-0.52	-0.87
Pro		-1.45**	-1.32**
Reasons for joining Jamendo			
Create a buzz		0.36*	0.35*
Uses CC		-1.12***	-0.41*
Earn money		0.11	0.27
Web site is attractive		0.24	0.25

No of listeners		-0.18	-0.04
No of artists		0.59***	0.73***
Reasons for choosing Creative Commons			
Obligatory on Jamendo			-0.16
Create a buzz			-0.29
Development of musical creativity			-0.80***
Means of sharing			-1.30***
Log of likelihood function			

*** significant at 1% ** 5% * 10%

Table 2 Binary Logit Choice of Type of Creative Commons : Probability that NC=1 (unconditional : 0.37) (BY-NC, BY-NC-ND, BY-NC-SA)			
	(1) Correct predictions 64%	(2) Correct predictions 69%	(3) Correct predictions 79%
Constant	-21.95	-43.13	-46.34
Country			
France	-0.15	-0.17	-0.15
Germany	0.26	0.26	0.22
Spain	0.17	0.11	0.09
Italy	0.02	-0.06	-0.07
Characteristics			
Age	-0.03***	-0.025***	-0.024***
Solo artist	-0.46**	-0.44**	-0.47**
Students	-0.17	-0.23	-0.25
Year created	0.01	0.02	0.02
Musical style (ref: Rock and Pop)			
Classical	-0.02	0.005	0.08
Contemporary	-0.33	-0.35	-0.34
Jazz	0.53**	0.51**	0.44*
Electronic	0.28	0.23	0.25
Folk and Country	0.29	0.26	0.33
Soul	-0.15	-0.10**	0.05
Other	0.76	0.64	0.78
Publicity			
Other sites	0.05	0.07	0.05
Own web site	-0.01	-0.17	-0.24
Own blog	0.19	0.16	0.21
Functioning :			
Leader(s)	-0.53*	-0.45	-0.47
Professional	0.15	0.30	0.48
Output			

Albums	0.09***	0.09**	0.09**
Concerts	-0.002	-0.003	-0.003
Merchandise	-0.32	-0.39	-0.51
CD sales	-0.15	-0.19	-0.12
Receives income		0.20	0.07
Income from Jamendo			
Publicity		-0.59	-0.38
Pro		1.19***	1.10**
Reasons for joining Jamendo			
Create a buzz		0.22	0.31*
Uses CC		0.83***	0.30
Earn money		-0.61***	-0.65***
Web site is attractive		-0.03	-0.002
No of listeners		-0.20	-0.30
No of artists		0.10	0.09
Reasons for choosing Creative Commons			
Obligatory on Jamendo			-0.44*
Create a buzz			-0.12
Development of musical creativity			0.54***
Means of sharing			0.72***
Log of likelihood function			

Table 3 Binary Logit Choice of Type of Creative Commons : Probability that ND=1 (unconditional : 0.29) (BY-ND, BY-NC-ND)			
	(1) Correct predictions 64%	(2) Correct predictions 66%	(3) Correct predictions 68%
Constant	25.95	21.95	15.18
Country			
France	0.41	0.29	0.28
Germany	-0.03	-0.11	-0.13
Spain	-0.04	0.03	0.03
Italy	0.55**	0.46*	0.49*
Characteristics			
Age	-0.02***	-0.02**	-0.02*
Solo artist	-0.13	-0.11	-0.12
Students	-0.10	0.05	0.07
Year created	-0.01	-0.01	-0.01
Musical style (ref: Rock and Pop)			

Classical	-0.14	-0.20	-0.23
Contemporary	0.64***	0.71***	0.79***
Jazz	0.15	0.14	0.07
Electronic	-0.11	-0.13	-0.16
Folk and Country	-0.04	-0.14	-0.17
Soul	-0.13	-0.24	-0.17
Other	-1.12	-1.05	-1.10
Publicity			
Other sites	-0.04	0.01	0.01
Own web site	0.34*	0.35*	0.33*
Own blog	0.19	0.22	0.21
Functioning :			
Leader(s)	0.29	0.34	-0.39
Professional	-0.49	-0.57	-0.48
Output			
Albums	-0.02	-0.03	-0.04
Concerts	0.001	0.002	0.002
Merchandise	0.31	0.39	0.33
CD sales	-0.002	0.03	0.04
Receives income		-0.36	-0.46*
Income from Jamendo			
Publicity		0.55	0.66
Pro		0.12	0.06
Reasons for joining Jamendo			
Create a buzz		-0.38**	-0.45**
Uses CC		0.12	-0.10
Earn money		0.42**	0.35*
Web site is attractive		-0.17	-0.21
No of listeners		0.20	0.15
No of artists		-0.55**	-0.62***
Reasons for choosing Creative Commons			
Obligatory on Jamendo			0.51**
Create a buzz			0.38*
Development of musical creativity			0.16
Means of sharing			0.62***
Log of likelihood function			

Appendix

Table A.1. Use of the different types of licence		
Choice of Licence	Percentage	Sample size
BY ONLY ¹²	33.59	262
BY ND	24.36	190
BY NC ND	5.00	39
BY SA	5.13	40
BY NC SA	21.28	166
BY NC	10.64	83

A.2 The logit model

For binary choices, the logit model estimates a probability of making a given choice as:

$$\text{Prob}(y_i = 1 | x_i) = \frac{\exp(x_i^T \beta)}{1 + \exp(x_i^T \beta)} \text{ and } \text{Prob}(y_i = 2 | x_i) = \frac{1}{1 + \exp(x_i^T \beta)}$$

The parameters in the numerator of the function for the second probability are set equal to zero since they cannot be determined independently since :

$$\text{Prob}(y_i = 2 | x_i) = 1 - \text{Prob}(y_i = 1 | x_i)$$

For multinomial choices, the probability of choosing option j out of 4 possible choices is given by :

$$\text{Prob}(y_i = j | x_i) = \frac{\exp(x_i^T \beta_j)}{1 + \exp(x_i^T \beta_2) + \exp(x_i^T \beta_3) + \exp(x_i^T \beta_4)}$$

The parameters in the exponential function for the one of probabilities are set equal to zero since they cannot be determined independently for the same reasons as in the binary case.

¹² The category 'BY ONLY' contains those not specifying a choice of CC.